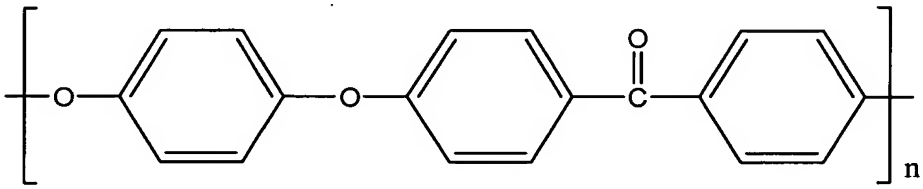
IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Original): Powder for use in the production of spatial structures, i.e. molded bodies, by means of layer build-up methods (powder-based generative rapid prototyping method), such as according to SLS (selective laser sintering) or laser melting technology, with at least a first matrix component that is present in the form of essentially spherical powder particles (18), which is formed by an aromatic polyether ketone plastic, particularly a polyaryl ether ketone (PEEK) plastic, having the repetition unit oxy-1,4-phenylene-oxy-1,4-phenylene-carbonyl-1,4-phenylene



Claim 2 (Original): Powder, particularly according to claim 1, for use in the production of spatial structures, i.e. molded bodies, by means of layer build-up methods (powder-based generative rapid prototyping method), such as according to SLS (selective laser sintering) or laser melting technology, with a first component that is present in the form of essentially spherical powder particles (18; 118; 218; 330; 430), which is formed by a matrix material, and at least another component in the form of stiffening and/or reinforcing fibers (140; 240; 340; 440).

Claim 3 (Original): Powder according to claim 2, wherein the volume proportion of the fibers (140) is up to 25%, preferably up to 15%, particularly preferably up to 10%.

Claim 4 (Original): Powder according to claim 2, wherein the fibers (240; 340; 440) are embedded in the matrix material (118; 330), preferably in such a manner that they are essentially completely surrounded by the matrix material.

Claim 5 (Original): Powder according to claim 4, characterized in that the volume proportion of the fibers (240; 340; 440) is greater than 15%, preferably greater than 25%.

Claim 6 (Currently Amended): Powder according to claim 2 ~~one of claims 2 to 5~~, characterized in that the matrix material is formed by a thermoplastic plastic.

Claim 7 (Original): Powder according to claim 6, characterized in that the matrix material is formed by a polyamide with higher cross-linking, such as PA11 or PA12.

Claim 8 (Currently Amended): Powder according to claim 6 ~~or 7~~, characterized in that the fibers are formed by carbon and/or glass fibers.

Claim 9 (Currently Amended): Powder ~~Method~~ according to claim 1 ~~one of claims 1 to 8~~, wherein the average grain size d50 of the spherical powder particles lies in the range of 20 to 150, preferably 40 to 70 µm.

Claim 10 (Currently Amended): Powder according to claim 2 ~~one of claims 2 to 5~~, characterized in that the matrix material is formed by a metallic material.

Claim 11 (Original): Powder according to claim 10, characterized in that the fibers are selected from the group of ceramic fibers and boron fibers.

Claim 12 (Currently Amended): Powder according to claim 9 ~~or 10~~, wherein the average grain size d50 of the spherical powder particles lies in the range of 10 to 100, preferably 10 to 80 µm.

Claim 13 (Currently Amended): Powder according to claim 2 ~~one of claims 2 to 12~~, characterized in that the average length L50 of the fibers (140; 240) corresponds to maximally the value of the average grain size d50 of the spherical powder particles (118; 218; 330; 430).

Claim 14 (Currently Amended): Method for the production of a powder, particularly according to Claim 1 ~~one of claims 1 to 13~~, having essentially spherical powder particles, for use in the production of spatial structures, i.e. molded bodies, by means of layer build-up methods (powder-based generative rapid prototyping method), such as according to SLS (selective laser sintering) or laser melting technology, wherein optionally, stiffening and/or

reinforcing fibers ~~(~~) are embedded in the powder particles consisting of a thermoplastic matrix material, having the following method steps:

a) Formation of a suspension having a matrix micropowder (22; 322) stirred into a liquid phase (20; 320), such as ethanol or an ethanol/water mixture, having a particle size that lies significantly below the dimension of the powder particle to be produced, and optionally having reinforcing and/or stiffening fibers (340) having a length that lies below the dimension of the powder particles to be produced;

b) Spraying of the suspension through a nozzle, to form droplets (32; 332) containing matrix micropowder and, optionally, fibers; and

c) Vaporization and/or evaporation of the volatile component (26; 326) of the droplets, leaving essentially spherical agglomerates (30; 330) behind.

Claim 15 (Currently Amended): Method for the production of a powder, particularly according to claim 2 ~~one of claims 2 to 13~~, having essentially spherical powder particles, for use in the production of spatial structures, i.e. molded bodies, by means of layer build-up methods (powder-based generative rapid prototyping method), such as according to SLS (selective laser sintering) or laser melting technology, wherein stiffening and/or reinforcing fibers (340) are embedded in the powder particles (330) consisting of a metallic matrix material, having the following method steps:

a) Formation of a suspension having a matrix micropowder (322) stirred into a liquid phase (320), such as ethanol or an ethanol/water mixture, having a particle size that lies significantly below the dimension of the powder particle to be produced, and having reinforcing and/or stiffening fibers (340) having a length that lies below the dimension (DP) of the powder particles to be produced;

b) Spraying of the suspension through a nozzle, to form droplets (332) containing matrix micropowder and fibers; and

c) Vaporization and/or evaporation of the volatile component (326) of the droplets, leaving essentially spherical agglomerates (330) behind.

Claim 16 (Original): Method according to claim 14, wherein micropowder (22; 322) having an average grain size d50 between 3 and 10 μm, preferably 5 μm, and optionally, fibers (340) having an average length L50 of 20 to 150 μm, preferably 40 to 70 μm, are used.

Claim 17 (Original): Method according to claim 15, wherein micropowder (322) having an average grain size d50 between 3 and 10 μm, preferably 5 μm, and fibers (340) having an average length L50 of 10 to 100 μm, preferably 10 to 80 μm, are used.

Claim 18 (Currently Amended): Method according to claim 14 ~~one of claims 14 to 17~~, characterized in that the spraying of the suspension takes place in such a manner that essentially spherical microdroplets (32; 332) having an average diameter d50 of 10 to 70 μm are formed.

Claim 19 (Currently Amended): Method according to claim 13 ~~one of claims 13 to 15~~, characterized in that the vaporization and/or evaporation step is carried out while the droplets (32; 332) are being moved through a heating segment.

Claim 20 (Currently Amended): Method for the production of a powder, particularly according to Claim 1 ~~one of claims 1 to 13~~, having essentially spherical powder particles, for use in the production of spatial structures, i.e. molded bodies, by means of layer build-up methods (powder-based generative rapid prototyping method), such as according to SLS (selective laser sintering) or laser melting technology, wherein optionally, stiffening and/or reinforcing fibers (440) are embedded in the powder particles (430) consisting of a thermoplastic matrix material, having the following method steps:

a) Cooling of coarse granulate (450) made of optionally fiber-reinforced plastic, below a temperature at which the matrix material becomes brittle;

b) Grinding of the cooled granulate; and

c) Separation of the ground material, in accordance with a predetermined fraction spectrum.

Claim 21 (Original): Method according to claim 20, characterized in that the step of grinding takes place using a pinned disk mill (460).

Claim 22 (Currently Amended): Method according to claim 20 ~~or 21~~, characterized in that the step of grinding takes place with additional cooling.

Claim 23 (Currently Amended): Method according to claim 20 ~~one of claims 20 to 22~~, characterized in that the method step of separation takes place using an air separator (480).

Claim 24 (Currently Amended): Method according to claim 20 ~~one of claims 20 to 23~~, characterized in that the ground material is subjected to smoothing treatment, for example by embedding or accumulation of microparticles and/or nanoparticles, such as Aerosil.

Claim 25 (Currently Amended): Method for the production of a powder, particularly according to Claim 1 ~~one of claims 1 to 13~~, having essentially spherical powder particles, for use in the production of spatial structures, i.e. molded bodies, by means of layer build-up methods (powder-based generative rapid prototyping method), such as according to SLS (selective laser sintering) or laser melting technology, wherein optionally, stiffening and/or reinforcing fibers ~~(~~ are embedded in the powder particles ~~)~~ consisting of a matrix material, having the following method steps:

a) Melting the matrix material;

b) Optionally stirring the fibers into the melt;

c) Blowing the melt, which optionally contains the fibers, through a nozzle, to form droplets that optionally contain fibers; and

d) Passing the droplets through a cooling segment.

Claim 26 (Original): Method according to claim 25, characterized in that the atomization of the melt takes place in a hot gas jet.

Claim 27 (Currently Amended): Method according to claim 25 ~~or 26~~, characterized by the additional method step of separating the powder particles in accordance with a predetermined fraction spectrum.

Claim 28 (Currently Amended): Method for the production of spatial structures, i.e. molded bodies, by means of layer build-up methods (powder-based generative rapid

prototyping method), such as according to SLS (selective laser sintering) or laser melting technology, using a powder according to Claim 1 ~~one of claims 1 to 13~~.

Claim 29 (Currently Amended): Molded body that can be obtained by means of a layer build-up method (powder-based generative rapid prototyping method), such as according to SLS (selective laser sintering) or laser melting technology, using a powder according to Claim 1 ~~one of claims 1 to 13~~.

Claim 30 (Original): Molded body according to claim 29, having interior reinforcements, preferably three-dimensional framework-like reinforcements.

BASIS FOR THE AMENDMENT

The specification has been amended to correct obvious typographical or clerical errors. The claims have been amended to remove multiple dependencies. No new matter is believed to have been added by this amendment.

An action on the merits and allowance of claims is respectfully solicited.

Respectfully submitted,

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